



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Himiko TAKAYAMA, et al Art Unit: 1764
Serial No: 09/823,086 Examiner: Ellen M McAvoy
Filed: March 29, 2001
For: LUBRICATING OIL COMPOSITION HAVING EXCELLENT THERMAL
STABILITY, EXTREME PRESSURE RESISTANCE AND ANTI-WEAR
PERFORMANCE

Hon. Commissioner of Patents and Trademarks
Washington, D.C. 20231

DECLARATION PURSUANT TO RULE 132

I, Himiko TAKAYAMA, one of the above-named applicants,
declare and state that:

1. I am familiar with the prosecution history of the application.
2. I have performed experimental runs to compare oleyl phosphate (which is employed as a representative phosphoric acid ester in Examples of Okada, et al, US 4,634,543, col. 6, lines 3-12) with tricresyl phosphate (which is employed in Example 1 of our specification and a representative trialkyl-phenyl phosphate) to evaluate the performances in the lubricating oil composition of our invention.
3. The experimental runs and evaluation have been carried out in the manner according to Example 1 and Performance Evaluation which are described in our specification. The results are set forth in the following table:

	Ex. 1 (wt.%)	Ex. H (wt.%)	Ex. I (wt.%)
Tricresyl phosphate	0.200	--	--
Oleyl phosphate	--	0.200	0.258
Dilauryl phosphite (solution)	0.025	0.025	0.025
Alkenylsuccinamide	0.050	0.050	0.050
Phosphorus content (ppm)	180	150	180
Modified CM Thermal Stability Test			
Sludge (mg)	1.0	157.0	171.7
Viscosity increase (%)	5	6	5

Remarks:

(1) The additive components were blended in a petroleum base oil having a viscosity @ 40°C of 36 cSt containing auxiliary additives (i.e., oxidation inhibitor, metal deactivator, demulsifier, anti-foaming agent, etc.).

(2) Example 1 corresponds to Example 1 described in our specification.

(3) The lubricating oil composition of Example H was prepared using oleyl phosphate in an amount identical to the amount of tricresyl phosphate used in Example 1.

(4) The lubricating oil composition of Example I was prepared using oleyl phosphate having a phosphorus content identical to that tricresyl phosphate used in Example 1.

4. My observation

Comparison between Example 1 (a lubricating oil composition according to our invention) with Examples H and I (a lubricating oil composition utilizing a phosphate additive which differs from our specified phosphate additive) indicates that our lubricating oil composition containing tricresyl

phosphate in place of oleyl phosphate according to Okada et al. shows prominent improvement in the thermal stability particularly in preventing sludge deposition.

5. The above declarant declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that any willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Himiko Takayama
Himiko TAKAYAMA

October 29, 2004